COMPLETE LISTING OF THE CLAIMS

The following lists all of the claims that are or were in the above-identified patent application.

1. (Original) A time scaling process for a multi-channel audio signal, comprising:

partitioning the audio signal into a plurality of intervals, each interval corresponding to a frame in each of multiple data channels of the multi-channel audio signal;

for each interval, determining an offset for the interval; and

time-scaling the multiple data channels, wherein for each of the frames, time scaling comprises using the offset for the interval corresponding to the frame when time scaling the frame.

2. (Original) The time scaling process of claim 1, wherein using the offset when time scaling a frame comprises using the offset to identify a block that is combined with the frame.

3. (Original) The process of claim 2, wherein for each of the frames, time scaling further comprises combining samples of the block with corresponding samples from the frame.

4. (Original) The process of claim 3, wherein for each sample in the block that is combined with corresponding samples from the frame, combining comprises:

multiplying the sample by a value of a first weighting function;

multiplying the corresponding sample from the frame by a value of a second weighting function; and

adding products resulting from the multiplying to generate a modified sample.

5. (Original) The process of claim 1, wherein determining an offset for an interval comprises searching average data that results from averaging data used in time scaling processes for the multiple data channels.

6. (Original) The process of claim 1, wherein determining an offset for an interval comprises:

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determining an average frame from a combination of all frames corresponding to interval;

searching for a best match block that best matches the average frame; and

selecting for the offset of the interval a value that identifies the best match block found for the average frame.

7. (Original) The process of claim 6, wherein searching for the best match block comprises searching a buffer that contains samples found by averaging corresponding samples used in time scaling of the multiple data channels.

8. (Original) The process of claim 1, wherein determining an offset for an interval comprises:

for each of the multiple data channels, searching a data buffer corresponding to the channel to identify a best matching block that best matches the frame that is in the data channel and corresponds to the interval; and

deriving the offset for the interval from the offsets to the best matching blocks in the data buffers.

9. (Original) The process of claim 1, wherein determining an offset for an interval comprises:

for each of a series of candidate offsets, accumulating differences between each frame corresponding to the interval and respective blocks that the candidate offset identifies; and

selecting as the offset the candidate offset that provides a smallest accumulated difference.

10. (Currently Amended) The process of claim 1, wherein determining an offset for the interval comprises extracting the offset from an augmented audio data structure that includes the frames and a set of predetermined offsets that correspond to the ~~frame~~ intervals and a set of time scales.

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11. (Currently Amended) The process of claim 1, wherein determining an offset for the interval comprises:

accessing an augmented audio data structure that includes the frames and a set of

predetermined offsets that correspond to the ~~frame~~ intervals and a set of time scales; and

interpolating between the predetermined offsets to determine an offset corresponding to the interval and a current time scale for the process.

12. (Original) A time scaling process for a stereo audio signal, comprising:

partitioning left data that represents a left channel of the stereo audio signal into a series of left frames;

partitioning right data that represents a right channel of the stereo audio signal into a series of right frames, wherein each right frame corresponds to one of the left frames and represents the right channel during a time interval in which the corresponding left frame represents the left channel; and for each pair of corresponding left and right frames:

determining an offset that identifies a right block of samples and a left block of samples; and

using the right block in generating time-scaled samples for the right channel; and

using the left block in generating time-scaled samples for the left channel.

13. (Original) The process of claim 12, wherein using the right block comprises:

multiplying samples in the right block by corresponding values of a first weighting function;

multiplying samples from the right frame in the pair by corresponding values of a second weighting function; and

adding corresponding products resulting from the multiplying to generate a modified sample.

14. (Original) The process of claim 13, wherein using the left block comprises:

multiplying samples in the left block by corresponding values of the first weighting function;

multiplying samples from the left frame in the pair by corresponding values of the second weighting function; and

adding corresponding products resulting from the multiplying to generate a modified sample.

15. (Original) The time scaling process of claim 12, wherein determining the offset

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comprises:

searching a left buffer to identify a block that best matches the left frame, a left offset identifying a location of the block in the left buffer;

searching the right buffer to identify a block that best matches the right frame, a right offset identifying a location of the block in the right buffer; and

deriving the offset from the left and right offsets.

16. (Original) The time scaling process of claim 12, wherein determining the offset comprises:

for each of a series of candidate offsets, determining an accumulated difference between the left and right frames and respective blocks that the candidate offset identifies in respective left and right buffers; and

selecting as the offset the candidate offset that provides the accumulated difference with the smallest value.

17. (Original) The process of claim 12, wherein determining the offset comprises extracting the offset from an augmented audio data structure that includes the left and right frames and for each pair of left an right frames, a set of predetermined offsets that correspond to the left and right frames and to a set of time scales.

18. (Original) The process of claim 12, wherein determining the offset comprises:

accessing an augmented audio data structure that includes the left and right frames and for each pair of left an right frames, a set of predetermined offsets that correspond to the pair and to a set of time scales; and

interpolating between the predetermined offsets to determine the offset corresponding to the interval and a current time scale for the process.

19. (Original) The process of claim 12, wherein all of the intervals have the same duration.

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20. (Original) The process of claim 12, wherein determining an offset comprises:

determining an average frame from the left and right frames in the pair;

searching for a best match block that best matches the average frame; and

selecting for the offset a value that identifies the best match block found for the average frame.

21. (Original) The process of claim 20, wherein searching for the best match block comprises searching a buffer that contains samples found by averaging a corresponding sample used in time scaling of the left channel and a corresponding sample used in time scaling of the right channel.

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